Procedure: *Configuration Management*	
Issue Date: May 12, 2000	**Procedure ID:** *P-CM-010*
Supersedes: March 8, 2000	**Rev/Change 2.0**

1. **Purpose:** To provide instructions for the Configuration Management of baselined items.

2. **Applicability:** This procedure is applicable to all government and contractor personnel assigned to ATISD.

3. **Responsibility:** Configuration Management Manager

4. **Support:** Project Team, Project Manager

5. **Invoked By:**
   Develop Products   P-PE-050
   Review and Approve Plans   P-PM-130

6. **Inputs:**
   Document Numbering   S-GP-255
   Configuration Management Plan   S-CM-030

7. **Outputs:**
   Change Notice   S-CM-050
   Modification Request   S-CM-010
   CCB Minutes   Defined in Glossary (Appendix G)

8. **Procedures Invoked:**   N/A

9. **External Procedures Referenced:**   N/A

10. **Procedure Steps:**
    The Configuration Management Manager is responsible for the following activities:

    a) **CM Plan** - The CM plan is developed in accordance with S-CM-030.
    b) **CM Tools** - After approval of the CM Plan, any CM tools to be used are installed and tested. User access is set up for tools that have access controls built in. If not, read/write access schemes for tool data are defined. Tools and platforms used by CM may include action item tracking tools, code management tools, build generation tools, and configuration status accounting tools.
    c) **Document Identifiers -** The CM Manager issues all document identifiers to project personnel upon request. A log or record of some type is maintained, either manual or electronic, to prevent duplicate numbers. Documents are identified and numbered in accordance with S-GP-255. All documents placed under CM control must have approved document identifiers.
    d) **CM Libraries/Databases** - The CM Libraries and databases are established by the CM Specialist. The library/database must allow for the following minimum characteristics:

?? Storage and retrieval of configuration items associated with the project

?? Provision of an audit trail of changes to a configuration item (revision history)

?? Read only access by all project members

?? Identification of configuration items that have been extracted for modification

?? Deletion of items only upon approved request

?? Backup and archiving of contents

?? Report generation

?? Identification of items by unique identifiers as specified in the project documents. The project specific details for the CM Library is defined in the project CM Plan.

e) **Check In/Check Out** - The CM Manager provides administrative oversight for all checks in and checks out of library items. A special form (CM Hand Over, etc.) may be used if desired. The method(s) used is defined in the CM Plan.

f) **Release Identification** – Each release should contain the software and information that has been tested and controlled as a total software system. The CM Manager is responsible for maintaining a record of the configuration items and their contents (versions), which comprise a release. Each release must be accomplished with a Build Directive (refer to S-CM-070). The CM Manager is responsible for delivering a copy of each release and its associated documentation to the ATISD Librarian for archival.

g) **Configuration Status Accounting** – The CM Manager maintains a CM database to provide readily available information concerning the status of the configuration items. This database should contain complete configuration information and should provide for reporting the following information:

?? Identification of controlled software and associated documents and their current status

?? Status of evolving baselines

?? Status of proposed and approved changes

?? Implementation status of approved changes

?? Traceability of changes from baselined items

h) **Configuration Status Reporting** – The CM Manager provides a report to the Project Manager on the status of the configuration activities on a periodic basis. The CM Specialist identifies the reporting period and the content of the report in the project CM Plan. Samples of items to be reported are:

?? CCB Meeting Minutes

?? Change request summary and status

?? Software baseline status

?? Trouble report summary

?? Results of software baseline audits

i) **Change Control**

?? All requests for changes to controlled items, including documents, software, and engineering drawings, are processed using the Modification Request (MR) S-CM-010. The person initiating the change completes the MR. (This is true even if the request for change was received from the Government.)

?? The individual initiating the change completes the **"Modification Request"** section of the MR and obtains a project unique tracking number from CM.

?? The CM specialist assigns a project unique tracking number to the MR and maintains a log/data base of all MRs and their status (open, closed, pending, etc.).

?? The Chief Engineer or designee assigns the MR to a project team member for analysis.

?? The individual conducting the analysis completes the **"Analysis**" section of the MR and determines if the Modification type is an *internal defect*, *internal change or external.*

?? Internal Defect - For this type defect, the Chief Engineer assigns the task in the Internal Defect section of the MR. The individual assigned checks out the product, completes the work and fills out the **"Internal Defect/Change (Completion**)" section of the MR. During the dry run or FAT phase the modification is verified by QA before the MR is returned to the CM Specialist for closure in the MR database. During all other test phases, the MR is returned to Configuration Management without QA approval.

?? Internal Change - For this type defect/change, the MR is returned to the CM Specialist who schedules a Configuration Control Board meeting. The CCB members are as defined in the CM Plan. Internal changes may be either of two types:

> **Class 1**
>> Have an impact on cost or schedule
>> Affect the form, fit or function of the system or component
>> Requires Government approval
> **Class 2**
>> Affects a lower level baseline
>> Does not have an effect on system function.

> After the CCB activity, the CCB makes the MR action recommendation and the CM Specialist updates the MR database.
> If the CCB determines the change will be implemented, the individual assigned the change checks out the product, performs the work, completes the **"Internal Defect/Change"** section of the MR and returns the MR to the CM Specialist for closeout in the database.

?? Modification Request (External) - this type of defect/change, the MR is sent to the outside organization (external to the project, may be a vendor, prime contractor, etc.). A date is recorded when the modification is expected to be completed, and the CM specialist tracks the MR to closure.

j) **Document Control** - Documents requiring project CM control are those documents as defined in the ASEPH procedures, designated Government documents, engineering drawings and all technical documents associated with a baseline, as defined in the project CM Plan.

?? The Project Manager is responsible for delivering all required documents to the Project CM specialist. These documents may be hard or soft copy format.

?? The CM Manager may, depending upon the document, distribute copies to applicable members of the Project Team. When copies are distributed, the CM Manager maintains a distribution list. *Distributed copies are reference copies*

only and will not be automatically updated. No controlled copies are distributed.

?? The CM Manager maintains a log of all documents in a database, the format and content is as defined in the Project CM Plan. The database must provide traceability for each document change to its authorizing Modification Request (MR).

?? Changes to controlled documents are processed using the MR and in the same manner as software changes.

?? After changes to controlled documents are completed, the CM Manager forwards a Change Notice (S-CM-050) to the individuals holding copies and/or other individuals on the team. It is the responsibility of the individual requiring the document to obtain the latest copy from the CM Specialist when required.

?? When updates to the Government supplied controlled documents are received from the Government, the CM Specialist forwards a Change Notice to the affected Project personnel notifying them of the change.

11. Notes: N/A